

5' 9 18 27 36 45 54
T CAG TTT CCT GCC AAT GAC GCT GGG GCA GCC GGG GCA GCC CGG CGG

63 72 81 90 99 108
TCA CCC CGC CCC CAG GCC CAC ACT AAG GGT GTC CGC GGC CTG CCC TCC AGG CGG

117 126 135 144 153 162
AGG AGC CCG GAC TGC GGA AGG ATG GAG CTG GCC GCC GGA AGC TTC TCG GAG GAG
M E L A A G S F S E E

171 180 189 198 207 216
CAG TTC TGG GAG GCC TGC TGC GGC GAG CTC CAG CAG CCC GCT CTG GCC GGG GCC GAC
Q F W E A C A E L Q Q P A L A G A D

225 234 243 252 261 270
TGG CAG CTC CTA GTG GAG ACC TCG GGC ATC AGC ATC TAC CGG CTG CTG GAC AAG
W Q L L V E T S G I S I Y R L L D K

279 288 297 306 315 324
AAG ACT GGA CTT TAT GAG TAT AAA GTC TTT GGT GTT CTG GAG GAC TGC TCA CCA
K T G L Y E Y K V F G V L E D C S P

333 342 351 360 369 378
ACT CTA CTG GCA GAC ATC TAT ATG GAC TCA GAT TAC AGA AAA CAA TGG GAC CAG
T L L A D I Y M D S D Y R K Q W D Q

387 396 405 414 423 432
TAT GTT AAA GAA CTC TAT GAA CAA GAA TGC AAC GGA GAG ACT GTG GTC TAC TGG
Y V K E L Y E Q E C N G E T V V Y W

FIGURE 1A

| | | | | | | |
|-------|---|---------------|-------|-----|-----|-----|
| 441 | GAA GTG AAG TAC CCT TTT CCC ATG TCC AAC AGA GAC TAT GTC TAC CTT CGG CAG | 450 | 459 | 468 | 477 | 486 |
| E V K | Y P F | M S N R D Y V | L R Q | | | |
| 495 | CGG CGA GAC CTG GAC ATG GAA GGG AGG AAG ATC CAT GTG ATC CTG GCC CGG AGC | 504 | 513 | 522 | 531 | 540 |
| R D L | M E G R K I H V I L A R S | | | | | |
| 549 | ACC TCC ATG CCT CAG CTT GGC GAG AGG TCT GGG GTG ATC CGG GTG AAG CAA TAC | 558 | 567 | 576 | 585 | 594 |
| T S M | P Q L G E R S G V I R V K Q Y | | | | | |
| 603 | AAG CAG AGC CTG GCG ATT GAG AGT GAC GGC AAG AAG GGG AGC AAA GTT TTC ATG | 612 | 621 | 630 | 639 | 648 |
| K Q S | L A I E S D G K K G S K V F M | | | | | |
| 657 | TAT TAC TTC GAT AAC CCG GGT GGC CAA ATT CCG TCC TGG CTC ATT AAC TGG GCC | 666 | 675 | 684 | 693 | 702 |
| Y F D | N P G G Q I P S W L I N W A | | | | | |
| 711 | GCC AAG AAT GGA GTT CCT AAC TTC TTG AAA GAC ATG GCA AGA GCC TGT CAG AAC | 720 | 729 | 738 | 747 | 756 |
| A K N | G V P N F L K D M A R A C Q N | | | | | |
| 765 | TAC CTC AAG AAA ACC TAA GAA AGA GAA CTG GGA ACA TTG CAT CCA TGG GTT GAT | 774 | 783 | 792 | 801 | 810 |
| Y L K | K T | | | | | |

FIGURE 1B

| | | | | | |
|---|------|------|------|------|------|
| 819 | 828 | 837 | 846 | 855 | 864 |
| GTC TCT GGA AGT GCA ACC ACC CAA TGT CTC TGG AAG TGC CAC CTG GAA GTG CCA | | | | | |
| 873 | 882 | 891 | 900 | 909 | 918 |
| CCT GGA AGT GTC TCT GGA AGA GCA CCC ACC ACC ACT GTT CAG CCT TCC CCT GCT GTT | | | | | |
| 927 | 936 | 945 | 954 | 963 | 972 |
| TCT GTC TTC AGA GGC CTA CAC ACT ACC ACA TCC TTT CTA AGC ATG TTT GCC TGA | | | | | |
| 981 | 990 | 999 | 1008 | 1017 | 1026 |
| CAT CCA GCT CAC TCG TCT GCT TCC TTT CTC GCT CCC CCC CAT CCT GGT GGT GGT | | | | | |
| 1035 | 1044 | 1053 | 1062 | 1071 | 1080 |
| GCT GCC TTC TTC TAC AGT TCA ATA TGG GGC AGA CTA GGA AAA CCT TTG CTT GCT | | | | | |
| 1089 | 1098 | 1107 | 1116 | 1125 | 1134 |
| TAC TAT TAG GAG GGG AAG TCT TCA GTA GGG AAC ACG ATC ATT CCA TTG TGC AAT | | | | | |
| 1143 | 1152 | 1161 | 1170 | 1179 | 1188 |
| TTT ACG GGG ATG GGT GGG CGG AGG GAC ACA ACA AAA TTT AAG AAT GAC TAT TTG | | | | | |
| 1197 | 1206 | 1215 | 1224 | 1233 | 1242 |
| GGC GGG CTG GCT CTT TTG CAG CTT GTG ATT TCT TCC AGC TTG GGA GGG GCT GCT | | | | | |
| 1251 | 1260 | 1269 | 1278 | 1287 | 1296 |
| GGA AGT GGC ATT TCG TTC AGA GCT GAC TTT CAG TGC ACC CAA ACT GGA TGA CGT | | | | | |
| 1305 | 1314 | 1323 | 1332 | 1341 | 1350 |
| GCC AAT GTC CAT TTG CCT TAT GCT TTG TGG AGC TGA TTA GGC TGG GAT TTG AGG | | | | | |

FIGURE 1C

| | | | | | |
|---|------|------|------|------|------|
| 1359 | 1368 | 1377 | 1386 | 1395 | 1404 |
| TGA TAA TCC AGT AAG TCT TTC CTC GTT CCT ACT TGT GGA GGA TCA GTA GCT GTT | | | | | |
| 1413 | 1422 | 1431 | 1440 | 1449 | 1458 |
| ATG ATG CCA GAC CAT TTG GAG AAG TAT CAG AGG CCT GAC CGG ACA CAT AAT ACG | | | | | |
| 1467 | 1476 | 1485 | 1494 | 1503 | 1512 |
| ACA ACC ACA TTT TTC CTC ATC ATC CAT GAG GAA ATG GAT GAT TCT TTT CCA | | | | | |
| 1521 | 1530 | 1539 | 1548 | 1557 | 1566 |
| TAT GTC ACT GGG GGA AAG GCT GCC TGT ACC TCT CAA GCT TTT CAT TTT ACT GGA | | | | | |
| 1575 | 1584 | 1593 | 1602 | 1611 | 1620 |
| AAC TGA GGC GTC AAG ATG GCT GTG GCC AGC TAG CAA AAG CAA AGA TGC TTT GTG | | | | | |
| 1629 | 1638 | 1647 | 1656 | 1665 | 1674 |
| CAT AGC CTT GTG AAA AAG TAT CTT TCT ATG CAA TAA GAT GAA TTT TCC TCC CAG | | | | | |
| 1683 | 1692 | 1701 | 1710 | 1719 | 1728 |
| AAT ATT TAG AAA TGT AGA AGG GAT AAC AGT TCA CAG CCA GGT AAA ATT TAA CTG | | | | | |
| 1737 | 1746 | 1755 | 1764 | 1773 | 1782 |
| GTG GCT TAA TGA CTC TGC ACC TTT TTC TCA GGA ATT CTG CCT AAG TTG TCT GCC | | | | | |
| 1791 | 1800 | 1809 | 1818 | 1827 | 1836 |
| TTT TCT ACC ACC AAA AAG ACT TTT AGT TTT CTA TGC TTT CTC CTG AAT TTT GGT | | | | | |
| 1845 | 1854 | 1863 | 1872 | 1881 | 1890 |
| AGG GTA AGG TAT TTC TAT GTC AAA GGC ACA GCC TTG ATG ATC TCA GGG AAA AAT | | | | | |

FIGURE 1D

| | | | | | |
|---|------|------|------|------|------|
| 1899 | 1908 | 1917 | 1926 | 1935 | 1944 |
| TTT AAT CAC TGT GTA TAA TGA TAC TGA ACC TTG ATT AAT AAC AGA AAT TCA GGA | | | | | |
| 1953 | 1962 | 1971 | 1980 | 1989 | 1998 |
| TGT AAA GCC ACA GAA TGG GAT TTA TTA ATG TGG GAT ACC TCA GAC TGT TTG TTT | | | | | |
| 2007 | 2016 | 2025 | 2034 | 2043 | 2052 |
| TCT TTC TGG GAA GAA AAG TGT GTT CTA TAA TGA ATA AAT ATA GAG TGG TTT TTA | | | | | |

A 3'

FIGURE 1E

[illegible]

FIGURE 2A

| | | | | | |
|---|-------------------------------------|-----|-----|-----|-----|
| 387 | 396 | 405 | 414 | 423 | 432 |
| GAT GCC CCT AGC AGA GCA GAA CCC AGA CAG AGA TTC TGG AGA CAT TGG CTG GTA | D A P S R A E P R Q R F W R H W L V | | | | |
| 441 | 450 | 459 | 468 | 477 | 486 |
| ACA GAT ATC AAG GGC GCC GAC CTG AAG GAA GGG AAG ATT CAG GGC CAG GAG TTA | T D I K G A D L K E G K I Q G Q E L | | | | |
| 495 | 504 | 513 | 522 | 531 | 540 |
| TCA GCC TAC CAG GCT CCC TCC CCA CCG GCA CAC AGT GGC TTC CAT CGC TAC CAG | S A Y Q A P S P A H S G F H R Y Q | | | | |
| 549 | 558 | 567 | 576 | 585 | 594 |
| TTC TTT GTC TAT CTT CAG GAA GGA AAA GTC ATC TCT CTC CTG AAC GAA AAC | F F V Y L Q E G K V I S L L P K E N | | | | |
| 603 | 612 | 621 | 630 | 639 | 648 |
| AAA ACT CGA GGC TCT TGG AAA ATG GAC AGA TTT CTG AAC CGC TTC CAC CTG GGC | K T R G S W K M D R F L N R F H L G | | | | |
| 657 | 666 | 675 | 684 | 693 | 702 |
| GAA CCT GAA GCA AGC ACC CAG TTC ATG ACC CAG AAC TAC CAG GAC TCA CCA ACC | E P E A S T Q F M T Q N Y Q D S P T | | | | |
| 711 | 720 | 729 | 738 | 747 | 756 |
| CTC CAG GCT CCC AGA GGA AGG GCC AGC GAG CCC AAG CAC AAA AAC CAG GCG GAG | L Q A P R G R A S E P K H K N Q A E | | | | |

FIGURE 2B

| | | | | | |
|---|-----|-----|-----|-----|-----|
| 765 | 774 | 783 | 792 | 801 | 810 |
| ATA GCT GCC TGC TAG ATA GCC GGC TTT GCC GCA TGT GGC CAC ACT GCC | | | | | |
| I A A C | | | | | |
| 819 | 828 | 837 | 846 | 855 | 864 |
| CAC CAC CGA CGA TGT GGG TAT GGA ACC CCC TCT GGA TAC AGA ACC CCT TCT TTT | | | | | |
| 873 | 882 | 891 | 900 | | |
| CCA AAT AAA AAA AAA ATC ATC CAG GGC TTG GTG CTT TGT 3' | | | | | |

FIGURE 2C

| | | |
|-----|---|-----------|
| 1 | M E L A A G S F S E E Q F W E A C A E L | 3014759 |
| 1 | M D P G A G A F S E E Q F R E A C A E L | GI 897693 |
| 21 | Q Q P A L A G A D W Q L L V E T S G I S | 3014759 |
| 21 | Q R P A L S G A A W E L L V E T Q G I S | GI 897693 |
| 41 | I Y R L L D K K T G L Y E Y K V F G V L | 3014759 |
| 41 | V Y R L L D Q Q T G L Y A Y K V F G V L | GI 897693 |
| 61 | E D C S P T L L A D I Y M D S D Y R K Q | 3014759 |
| 61 | E D C L P D L L A D V Y M D L A Y R K Q | GI 897693 |
| 81 | W D Q Y V K E L Y E Q E C N G E T V V Y | 3014759 |
| 81 | W D Q Y V K E L Y E K E C S G E T V V Y | GI 897693 |
| 101 | W E V K Y P F P M S N R D Y V Y L R Q R | 3014759 |
| 101 | W Q V K Y P F P M S N R D Y V Y V R Q R | GI 897693 |
| 121 | R D L D M E G R K I H V I L A R S T S M | 3014759 |
| 121 | Q E L D F E G Q K V H V I L A Q S T S E | GI 897693 |
| 141 | P Q L G E R S G V I R V K Q Y K Q S L A | 3014759 |
| 141 | P Q F P E K S G V I R V K H Y K Q R L A | GI 897693 |
| 161 | I E S D G K K G S K V F M Y Y F D N P G | 3014759 |
| 161 | I Q S D G K K G S K V F M Y Y F D N P G | GI 897693 |
| 181 | G Q I P S W L I N W A A K N G V P N F L | 3014759 |
| 181 | G Q I P S W V I N W A A K N G V P N F L | GI 897693 |
| 201 | K D M A R A C Q N Y L K K T | 3014759 |
| 201 | K D M V K A C Q N Y - K K T | GI 897693 |

FIGURE 3

| | | |
|-----|---|------------|
| 1 | M G W T M R L V T A A L L L G L M M V V | 3126479 |
| 1 | V - - - - - V S T S P T K L - - - - - | GI 1143527 |
| 21 | T G D E D E N S P C A H E A L L D E D T | 3126479 |
| 10 | - - - - - - - - - - - - - - - - - | GI 1143527 |
| 41 | L F C Q G L E V F Y P E L G - N I G C K | 3126479 |
| 10 | - - - - - V N V S Y N N L T V N L G N E | GI 1143527 |
| 60 | V V P D C N N Y R O K I T S W M E P I V | 3126479 |
| 25 | L T P T Q V K N Q P T K V S W - - - - - | GI 1143527 |
| 80 | K F P G A V D G A T Y I L V M V D P D A | 3126479 |
| 40 | - - - D A E P G A L Y T L V M T D P D A | GI 1143527 |
| 100 | P S R A E P R Q R F W R H W L V T D I K | 3126479 |
| 57 | P S R K N P V F R E W H H W L I I N I S | GI 1143527 |
| 120 | G A D L K E G K I Q G Q E L S A Y Q A P | 3126479 |
| 77 | G Q N V S S G T V - - - - L S D Y I G S | GI 1143527 |
| 140 | S P P A H S G F H R Y Q F F V Y L Q E G | 3126479 |
| 93 | G P P K G T G L H R Y V F L V Y K Q P G | GI 1143527 |
| 160 | K V I S L L P K E N K T R G S W K M D R | 3126479 |
| 113 | S I T D - - T Q H G G N R P N F K V M D | GI 1143527 |
| 180 | F L N R F H L G E P E A S T Q F M T Q N | 3126479 |
| 131 | F A N K H H L G N P V A G N F F - - - - | GI 1143527 |
| 200 | Y Q D S P T L Q A P R G R A S E P K H K | 3126479 |
| 147 | - - - - - - - - - - - - - - Q A K H E | GI 1143527 |
| 220 | N Q A E I A A C | 3126479 |
| 152 | D | GI 1143527 |

FIGURE 4

09879401-051101

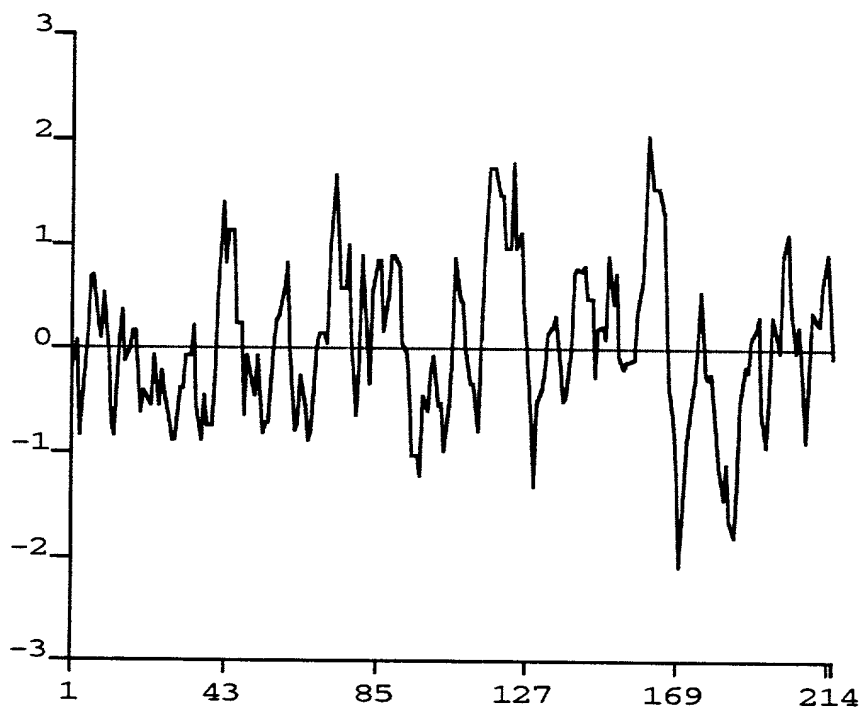


FIGURE 5A

09079401.061101
TOT90.T045/250

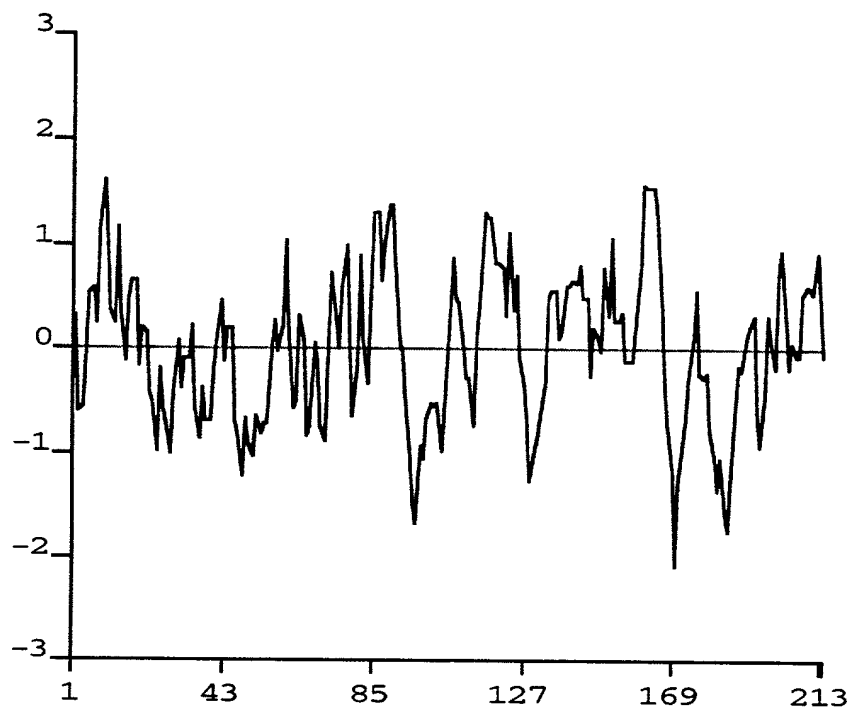


FIGURE 5B